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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,721	11/14/2001	Mao Chen	08CS05932	5320

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EXAMINER

BERMAN, SUSAN W

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/990,721

Applicant(s)

CHEN ET AL.

Examiner

Susan W Berman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 23-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-32 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Restriction Requirement*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-22, drawn to a radiation curable coating composition, classified in class 522, subclass 96.
- I. Claims 23-32, drawn to a method of applying a coating, classified in class 427, subclass 487.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the radiation curable coating could be applied to a different substrate, such as wood. Additionally, the coating composition of Group I could have a composition comprising 90 parts of oligomeric acrylate, 5 parts of acrylate, 3 parts of colloidal silica and 2 parts of photoinitiator.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

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During a telephone conversation with Hahn Pham on July 24, 2002, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention. Applicant is advised that method claims of the same scope may be rejoined with composition claims upon determination of allowable subject matter with regard to the composition claims.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### *Specification*

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how the oligomeric acrylate or monomeric acrylate can have a crosslinkable functionality of "1" since at least two functional groups (acrylate groups) are required for crosslinking. Applicant discloses that the term "acrylate" is intended to include methacrylates. It is suggested that applicant amend

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“acrylate” to read “(meth)acrylate” in order to clearly set forth acrylate and methacrylate in the claims since disclosures within the specification are not necessarily read into the claims.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Katsamberis (5,426,131). Katsamberis discloses compositions comprising the instantly recited components wherein the oligomer is a urethane acrylate oligomer used in amounts from 5 to 40 wt. percent. See the Abstract, column 5, lines 31-44, column 8, line 57, to column 9, line 25, column 10, lines 32-43. The weight percents of the components disclosed by Katsamberis overlap those set forth in the instant claims. Therefore, with respect to claims 3-22, Katsamberis discloses the instantly claimed compositions wherein the wt percents correspond to those set forth in the instant claims.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamaya et al (5,494,645). Tamaya et al disclose compositions comprising the instantly recited components wherein the oligomer is an acrylated isocyanurate. See column 2, line 45, to column 3, line 27, column 4, lines 25-41, column 4, line 63, to column 5, line 10, column 5, lines 55-63, column 6, lines 43-55, column 7, lines 27-29. Examples 1 and 6 disclose compositions comprising an acrylated isocyanurate and an acrylate-functional monomer. The weight percents of the components disclosed by Tamaya et al overlap those set

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forth in the instant claims. Therefore, with respect to claims 3-22, Tamaya et al disclose the instantly claimed compositions wherein the wt percents correspond to those set forth in the instant claims.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamura et al (5,635,544). Tamura et al disclose compositions comprising the instantly recited components wherein the oligomer is an acrylated isocyanurate or acrylated urethane. See column 2, line 34, to column 3, line 7, column 6, lines 4-24 and lines 43-54, column 7, lines 31-33, column 8, lines 8-15, column 8, lines 38-56, and Table 1. Tamura et al disclose compositions comprising an acrylated isocyanurate or acrylated urethane mixed with acrylate-functional monomers. The weight percents of the components disclosed by Tamura et al overlap those set forth in the instant claims. Therefore, with respect to claims 3-22, Tamura et al disclose the instantly claimed compositions wherein the wt percents correspond to those set forth in the instant claims.

Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Patel (5,811,472 or 5,990,188). Patel discloses radiation curable compositions comprising components corresponding to the instantly claimed components wherein the oligomer is a urethane acrylate or polyester acrylate. Patel '472: See the Abstract, column 3, lines 13-34, column 4, line 65, to column 5, line 7, and Table III. Examples 6, 8 and 11 disclose compositions comprising an acrylate oligomer and an acrylate monomer. Patel '188: See the Abstract, column 4, line 58, to column 5, line 10, column 6, lines 51-58. The weight percents of the components disclosed by Patel overlap those set forth in the instant claims. Therefore, with respect to claims 3-22, Patel discloses the instantly claimed compositions wherein the wt percents correspond to those set forth in the instant claims.

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Claims 1-22 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 97/11129. US 6,306,502 is relied upon for translation of WO '129. See column 3, lines 10-61, column 4, line 3m to column 5, line 6, column 7, line 31, to column 8, line 25, column 9, line 38, to column 10, line 66, column 11, lines 58-65. The weight percents of the components disclosed by WO '129 overlap those set forth in the instant claims. Therefore, with respect to claims 3-22, WO '129 discloses the instantly claimed compositions wherein the wt percents correspond to those set forth in the instant claims.

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al (5,712,325). Lewis et al disclose compositions comprising a dispersion of colloidal silica treated with an alkoxysilylacrylate and mixed with an acrylate-functional monomer. See column 2, lines 33-48, and column 5, lines 14-44. Acrylate oligomers, such as hexafunctional polyurethane acrylate or silicone acrylate oligomer are taught in column 4, lines 14-52.

It would have been obvious to one skilled in the art at the time of the invention to include an acrylate oligomer in the disclosed compositions, as taught by Lewis et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of success because Lewis et al teach adding oligomeric acrylates. It would have been obvious to one skilled in the art at the time of the invention to determine the optimum weight percents of components following the teachings of Lewis et al. One of ordinary skill in the art at the time of the invention would have been motivated by a desire to optimize the properties sought in the instant application.

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 703 308 0040. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703 308 2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0661.



Susan W Berman  
Primary Examiner  
Art Unit 1711

SB  
August 26, 2003